

Subgroup Achievement and Gap Trends — Montana

K-12 enrollment — 141,786

The raw data used to develop these state profiles, including data for additional grade levels and years before 2002, can be found on the CEP Web site at www.cep-dc.org. Click on the link on the left labeled State Testing Data. In the list of results that appears, look for the most recent report on student achievement since 2002. Below the name of the report, click on the link for State Profiles and Worksheets. Scroll down the page until you reach the list of states. Click on the Worksheet link for proficiency data or scale score data for a particular state.

Subgroup Achievement Trends and Gap Trends — Key Findings

Summary. In grade 8 reading (the only grade in which subgroup trends were analyzed by achievement level), Montana showed across-the-board gains at the *basic-and-above*, *proficient-and-above*, and *advanced* levels for the state's major racial/ethnic subgroups and low-income students. In grade 8 math, however, trends for subgroups were mixed. Progress in narrowing achievement gaps at grades 4, 8, and 10 was also mixed. Comparable data were available for 2004-2009 at all three grades analyzed.

- **Mixed subgroup trends in grade 8 math.** The percentages of students reaching the *advanced* achievement level increased for Native American, white, and low-income students and for boys and girls. But the percentages reaching the *basic-and-above* and *proficient-and-above* levels decreased for nearly all of these subgroups, except for Native Americans at the proficient level. (In Montana, the African American, Latino, and Asian subgroups are too small to yield reliable trends.)
- **Notable gains for subgroups.** In grade 8 reading, *Native American* students and *low-income* students made notable gains at the *proficient-and-above* and *basic-and-above* levels.
- **Mixed gap trends.** In reading across three grade levels, the majority of the achievement gaps analyzed narrowed according to both percentages proficient and average (mean) test scores. In math, however, half of the gaps analyzed widened according to these two indicators, while the rest narrowed or stayed the same.
- **Widening of gaps in grade 4 math.** In grade 4 math, gaps in percentages proficient, as well as in average test scores, widened for Native American and low-income students.

Data Limitations

Years of comparable percentage proficient data	2004 through 2009 for grades 4, 8, and 10 2006 through 2009 for grades 3, 5, 6, and 7
Years of comparable mean scale score data	2004 through 2005 and 2007 through 2009

Test Characteristics

The characteristics highlighted below are for the state reading and mathematics tests used for accountability under the No Child Left Behind Act (NCLB).

Test(s) used for NCLB accountability	Montana Comprehensive Assessment System (MontCAS–Phase 2) MontCAS Phase 2 Criterion-Referenced Test– Alternate Assessment (CRT–Alternate)
Grades tested for NCLB accountability	3–8, 10
State labels for achievement levels	MT uses four achievement levels: Novice, Nearing Proficient, Proficient, and Advanced. For our analyses we treated Nearing Proficient as Basic, Proficient as Proficient, and Advanced as Advanced.
High school NCLB test also used as an exit exam?	No
First year test used	2004
Time of test administration	Spring
Major changes in testing system (2002–present)	2004: Changed from using a norm-referenced test (Iowa Test of Basic Skills) for NCLB purposes to administering criterion-referenced MontCAS tests in spring 2004 2004: Began testing grade 10 instead of grade 11 2006: Added grades 3, 5, 6, and 7 to testing

Achievement by Subgroup — Trends at the Middle School Level

Note: The tables in this profile of subgroup achievement and gap trends begin with table 7. Tables 1 through 6 can be found in the companion state profile of general achievement trends.

Table MT-7. Percentages of grade 8 students by racial or ethnic subgroup scoring at the advanced, proficient-and-above, and basic-and-above levels in reading

	Reporting year								Average yearly percentage point gain ¹
Subgroup	2002	2003	2004	2005	2006	2007	2008	2009	
All tested students									
Advanced			27%	33%	30%	38%	45%	48%	4.2
Proficient-and-above			58%	64%	75%	79%	81%	81%	4.6
Basic-and-above			75%	80%	89%	90%	91%	92%	3.4
White									
Advanced			30%	36%	33%	41%	49%	51%	4.2
Proficient-and-above			63%	68%	80%	82%	84%	84%	4.2
Basic-and-above			80%	83%	92%	92%	93%	94%	2.8
African American ²									
Advanced			14%	19%	24%	43%	33%	40%	5.2
Proficient-and-above			43%	53%	62%	84%	80%	79%	7.2
Basic-and-above			69%	66%	89%	94%	91%	91%	4.4
Latino ²									
Advanced			18%	15%	18%	24%	34%	42%	4.8
Proficient-and-above			46%	45%	57%	75%	71%	71%	5.0
Basic-and-above			69%	67%	80%	87%	85%	88%	3.8
Asian ²									
Advanced			36%	52%	41%	45%	52%	60%	4.8
Proficient-and-above			74%	77%	80%	85%	88%	81%	1.4
Basic-and-above			87%	90%	93%	93%	94%	94%	1.4
Native American									
Advanced			8%	11%	10%	16%	21%	22%	2.8
Proficient-and-above			29%	32%	47%	52%	58%	57%	5.6
Basic-and-above			48%	52%	71%	72%	76%	78%	6.0

Table reads: The percentage of white 8th graders who scored at the advanced level on the state reading test increased from 30% in 2004 to 51% in 2009. During this period, the average yearly gain in the percentage advanced in reading for white 8th graders was 4.2 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2009 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

Table MT-8. Percentage of grade 8 students by demographic subgroup scoring at the advanced, proficient-and-above, and basic-and-above levels in reading

	Reporting year								Average yearly percentage point gain ¹
Subgroup	2002	2003	2004	2005	2006	2007	2008	2009	
All tested students									
Advanced			27%	33%	30%	38%	45%	48%	4.2
Proficient-and-above			58%	64%	75%	79%	81%	81%	4.6
Basic-and-above			75%	80%	89%	90%	91%	92%	3.4
Low-income students									
Advanced			15%	20%	17%	22%	30%	32%	3.4
Proficient-and-above			41%	48%	61%	66%	70%	69%	5.6
Basic-and-above			61%	67%	81%	82%	85%	86%	5.0
Students with disabilities ³									
Advanced			5%	4%	6%	7%	10%	8%	0.7
Proficient-and-above			18%	18%	33%	35%	39%	37%	1.3
Basic-and-above			34%	35%	59%	57%	63%	65%	2.0
English language learners ^{2,3}									
Advanced			3%	4%	5%	4%	8%	6%	0.3
Proficient-and-above			12%	15%	31%	27%	38%	27%	-1.3
Basic-and-above			27%	32%	60%	55%	65%	57%	-1.0
Female									
Advanced			31%	39%	36%	44%	50%	54%	4.6
Proficient-and-above			64%	71%	81%	83%	85%	85%	4.2
Basic-and-above			81%	85%	93%	92%	93%	95%	2.8
Male									
Advanced			23%	27%	25%	32%	41%	42%	3.8
Proficient-and-above			53%	57%	71%	74%	77%	77%	4.8
Basic-and-above			71%	74%	87%	87%	89%	90%	3.8

Table reads: The percentage of low-income 8th graders who scored at the advanced level on the state reading test increased from 15% in 2004 to 32% in 2009. During this period, the average yearly gain in the percentage advanced in reading for low-income 8th graders was 3.4 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2009 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups. Average yearly percentage point gains are based on 2006-2009 results.

Table MT-9. Percentages of grade 8 students by racial or ethnic subgroup scoring at the advanced, proficient-and-above, and basic-and-above levels in mathematics

	Reporting year								Average yearly percentage point gain ¹
Subgroup	2002	2003	2004	2005	2006	2007	2008	2009	
All tested students									
Advanced			18%	16%	25%	27%	26%	27%	1.8
Proficient-and-above			64%	63%	58%	60%	60%	60%	-0.8
Basic-and-above			89%	91%	84%	83%	86%	84%	-1.0
White									
Advanced			20%	18%	27%	30%	28%	30%	2.0
Proficient-and-above			69%	68%	62%	64%	63%	64%	-1.0
Basic-and-above			92%	93%	87%	86%	88%	86%	-1.2
African American ²									
Advanced			3%	6%	19%	21%	13%	14%	2.2
Proficient-and-above			44%	45%	47%	58%	45%	51%	1.4
Basic-and-above			85%	77%	69%	84%	78%	81%	-0.8
Latino ²									
Advanced			10%	10%	15%	17%	14%	16%	1.2
Proficient-and-above			55%	51%	36%	54%	48%	52%	-0.6
Basic-and-above			84%	85%	70%	78%	77%	77%	-1.4
Asian ²									
Advanced			31%	31%	35%	32%	34%	38%	1.4
Proficient-and-above			80%	69%	66%	68%	73%	73%	-1.4
Basic-and-above			94%	94%	93%	91%	92%	88%	-1.2
Native American									
Advanced			4%	4%	7%	8%	8%	9%	1.0
Proficient-and-above			29%	32%	27%	29%	29%	31%	0.4
Basic-and-above			68%	76%	58%	58%	61%	62%	-1.2

Table reads: The percentage of white 8th graders who scored at the advanced level on the state math test increased from 20% in 2004 to 30% in 2009. During this period, the average yearly gain in the percentage advanced in math for white 8th graders was 2.0 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2009 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

Table MT-10. Percentage of grade 8 students by demographic subgroup scoring at the advanced, proficient-and-above, and basic-and-above levels in mathematics

	Reporting year								Average yearly percentage point gain ¹
Subgroup	2002	2003	2004	2005	2006	2007	2008	2009	
All tested students									
Advanced			18%	16%	25%	27%	26%	27%	1.8
Proficient-and-above			64%	63%	58%	60%	60%	60%	-0.8
Basic-and-above			89%	91%	84%	83%	86%	84%	-1.0
Low-income students									
Advanced			9%	8%	13%	14%	15%	14%	1.0
Proficient-and-above			48%	48%	40%	43%	45%	44%	-0.8
Basic-and-above			81%	84%	71%	71%	76%	73%	-1.6
Students with disabilities ³									
Advanced			3%	2%	4%	5%	5%	3%	-0.3
Proficient-and-above			21%	24%	18%	16%	18%	14%	-1.3
Basic-and-above			59%	66%	45%	42%	47%	40%	-1.7
English language learners ^{2,3}									
Advanced			2%	2%	4%	2%	3%	3%	-0.3
Proficient-and-above			16%	20%	16%	11%	15%	14%	-0.7
Basic-and-above			52%	67%	44%	38%	46%	40%	-1.3
Female									
Advanced			17%	15%	24%	26%	25%	26%	1.8
Proficient-and-above			64%	62%	57%	60%	60%	60%	-0.8
Basic-and-above			89%	91%	84%	84%	86%	85%	-0.8
Male									
Advanced			19%	17%	26%	28%	26%	28%	1.8
Proficient-and-above			63%	64%	58%	59%	59%	60%	-0.6
Basic-and-above			88%	91%	82%	81%	84%	82%	-1.2

Table reads: The percentage of low-income 8th graders who scored at the advanced level on the state math test increased from 9% in 2004 to 14% in 2009. During this period, the average yearly gain in the percentage advanced in math for low-income 8th graders was 1.0 percentage points per year.

¹Averages are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2009 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups. Average yearly percentage point gains are based on 2006-2009 results.

Achievement by Subgroup — Gap Trends (Percentages Proficient)

Table MT-11. Subgroup achievement trends in reading by percentages proficient

NOTE: L = larger gain than comparison group. S = smaller gain than comparison group. E = equal gain to comparison group.

If the average annual gain for the subgroup of interest, such as African American students, is larger than the average annual gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Grade 4					Grade 8					Grade 10				
	Year span	Starting PP	Ending PP	Average annual gain ¹	Gain larger or smaller than comparison group	Year span	Starting PP	Ending PP	Average annual gain ¹	Gain larger or smaller than comparison group	Year span	Starting PP	Ending PP	Average annual gain ¹	Gain larger or smaller than comparison group
All tested students	04-09	65%	81%	3.2		04-09	58%	81%	4.6		04-09	63%	77%	2.8	
White	04-09	70%	85%	3.0		04-09	63%	84%	4.2		04-09	66%	80%	2.8	
African American	04-09	55%	75%	4.0 ²	L	04-09	43%	79%	7.2 ²	L	04-09	45%	79%	6.8 ²	L
Latino	04-09	56%	74%	3.6 ²	L	04-09	46%	71%	5.0 ²	L	04-09	51%	69%	3.6 ²	L
Asian	04-09	68%	86%	3.6 ²	L	04-09	74%	81%	1.4 ²	S	04-09	67%	72%	1.0 ²	S
Native American	04-09	38%	56%	3.6	L	04-09	29%	57%	5.6	L	04-09	30%	53%	4.6	L
Not low-income	04-09	74%	88%	2.8		04-09	66%	87%	4.2		04-09	69%	83%	2.8	
Low-income	04-09	51%	70%	3.8	L	04-09	41%	69%	5.6	L	04-09	45%	63%	3.6	L
Not disabled	06-09	85%	85%	0.0		06-09	82%	86%	1.3		06-09	81%	82%	0.3	
Students with disabilities ³	06-09	46%	48%	0.7	L	06-09	33%	37%	1.3	E	06-09	30%	30%	0.0	S
Not ELLs	06-09	82%	82%	0.0		06-09	78%	82%	1.3		06-09	78%	79%	0.3	
English language learners ³	06-09	38%	36%	-0.7 ²	S	06-09	31%	27%	-1.3 ²	S	06-09	28%	16%	-4.0 ²	S
Female	04-09	68%	84%	3.2		04-09	64%	85%	4.2		04-09	71%	82%	2.2	
Male	04-09	64%	78%	2.8	S	04-09	53%	77%	4.8	L	04-09	55%	72%	3.4	L

Table reads: In 2004, 70% of white 4th graders and 55% of African American 4th graders scored at the proficient level on the state reading test. In 2009, 85% of white 4th graders and 75% of African American 4th graders scored at the proficient level in reading. Between 2004 and 2009, the percentage proficient improved at an average rate of 3.0 percentage points per year for white students and 4.0 percentage points per year for African American students, indicating a larger rate of gain and a narrowing of the achievement gap for African American 4th graders.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2009 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table MT-12. Subgroup achievement trends in mathematics by percentages proficient

NOTE: L = larger gain than comparison group. S = smaller gain than comparison group. E = equal gain to comparison group.

If the average annual gain for the subgroup of interest, such as African American students, is larger than the average annual gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Grade 4					Grade 8					Grade 10				
	Year span	Starting PP	Ending PP	Average annual gain ¹	Gain larger or smaller than comparison group	Year span	Starting PP	Ending PP	Average annual gain ¹	Gain larger or smaller than comparison group	Year span	Starting PP	Ending PP	Average annual gain ¹	Gain larger or smaller than comparison group
All tested students	04-09	45%	67%	4.4		04-09	64%	60%	-0.8		04-09	60%	54%	-1.2	
White	04-09	49%	71%	4.4		04-09	69%	64%	-1.0		04-09	65%	58%	-1.4	
African American	04-09	32%	62%	6.0 ²	L	04-09	44%	51%	1.4 ²	L	04-09	31%	47%	3.2 ²	L
Latino	04-09	36%	56%	4.0 ²	S	04-09	55%	52%	-0.6 ²	L	04-09	44%	40%	-0.8 ²	L
Asian	04-09	55%	78%	4.6 ²	L	04-09	80%	73%	-1.4 ²	S	04-09	68%	63%	-1.0 ²	L
Native American	04-09	22%	41%	3.8	S	04-09	29%	31%	0.4	L	04-09	25%	24%	-0.2	L
Not low-income	04-09	53%	76%	4.6		04-09	72%	69%	-0.6		04-09	66%	61%	-1.0	
Low-income	04-09	33%	54%	4.2	S	04-09	48%	44%	-0.8	S	04-09	42%	37%	-1.0	E
Not disabled	06-09	68%	71%	1.0		06-09	63%	66%	1.0		06-09	59%	58%	-0.3	
Students with disabilities ³	06-09	33%	34%	0.3	S	06-09	18%	14%	-1.3	S	06-09	15%	11%	-1.3	S
Not ELLS	06-09	66%	69%	1.0		06-09	60%	62%	0.7		06-09	56%	55%	-0.3	
English language learners ³	06-09	25%	22%	-1.0 ²	S	06-09	16%	14%	-0.7 ²	S	06-09	12%	6%	-2.0 ²	S
Female	04-09	44%	66%	4.4		04-09	64%	60%	-0.8		04-09	61%	54%	-1.4	
Male	04-09	46%	67%	4.2	S	04-09	63%	60%	-0.6	L	04-09	59%	54%	-1.0	L

Table reads: In 2004, 49% of white 4th graders and 32% of African American 4th graders scored at the proficient level on the state math test. In 2009, 71% of white 4th graders and 62% of African American 4th graders scored at the proficient level in math. Between 2004 and 2009, the percentage proficient improved at an average rate of 4.4 percentage points per year for white students and 6.0 percentage points per year for African American students, indicating a larger rate of gain and a narrowing of the achievement gap for African American 4th graders.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2009 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Achievement by Subgroup — Gap Trends (Mean Scale Scores)

Table MT-13. Achievement gap trends in reading by mean scale scores

NOTE: L = larger gain than comparison group. S = smaller gain than comparison group. E = equal gain to comparison group. MSS = mean scale score. SD = standard deviation. If the average gain for the subgroup of interest, such as African American students, is larger than the average gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Statistic	Grade 4					Grade 8					Grade 10				
		Year span	Start year	End year	Avg. gain MSS ¹	Gain larger or smaller than comp. group	Year span	Start year	End year	Avg. gain MSS ¹	Gain larger or smaller than comp. group	Year span	Start year	End year	Avg. gain MSS ¹	Gain larger or smaller than comp. group
All tested students	MSS	04-09	258.5	274.2	3.1		04-09	253.6	276.0	4.5		04-09	258.4	272.3	2.8	
	SD	04-09	29.5	25.7			04-09	34.2	28.6			04-09	35.6	30.4		
White	MSS	04-09	261.4	277.3	3.2		04-09	257.0	278.8	4.4		04-09	261.6	275.1	2.7	
	SD	04-09	28.4	24.0			04-09	33.3	26.7			04-09	34.4	28.9		
African American	MSS	04-09	249.7	268.3	3.7 ²	L	04-09	243.4	272.1	5.7 ²	L	04-09	247.0	270.7	4.7 ²	L
	SD	04-09	28.1	25.7			04-09	33.2	28.4			04-09	35.5	29.3		
Latino	MSS	04-09	251.0	268.6	3.5 ²	L	04-09	243.9	268.7	5.0 ²	L	04-09	248.4	265.0	3.3 ²	L
	SD	04-09	28.5	30.2			04-09	32.8	35.8			04-09	35.6	31.3		
Asian	MSS	04-09	259.6	277.7	3.6 ²	L	04-09	265.7	279.1	2.7 ²	S	04-09	265.7	267.7	0.4 ²	S
	SD	04-09	27.3	24.5			04-09	29.2	29.1			04-09	33.9	32.3		
Native American	MSS	04-09	239.2	255.7	3.3	L	04-09	229.7	256.6	5.4	L	04-09	229.8	241.9	2.4	S
	SD	04-09	29.6	27.5			04-09	31.1	32.8			04-09	33.7	33.7		
Not low-income	MSS	04-09	264.7	280.5	3.2		04-09	260.2	282.1	4.4		04-09	262.9	277.2	2.9	
	SD	04-09	27.4	22.5			04-09	32.5	24.6			04-09	34.1	28.0		
Low-income	MSS	04-09	248.0	265.6	3.5	L	04-09	239.9	265.2	5.1	L	04-09	243.4	260.7	3.5	L
	SD	04-09	29.8	27.3			04-09	33.6	31.8			04-09	36.3	32.7		
Not disabled	MSS	07-09	275.9	277.4	0.8		07-09	276.2	280.3	2.1		07-09	274.2	276.3	1.0	
	SD	07-09	22.6	23.7			07-09	25.4	25.3			07-09	26.8	27.8		
Students with disabilities ³	MSS	07-09	249.7	241.4	-4.2	S	07-09	235.9	243.2	3.6	L	07-09	236.9	239.2	1.1	L
	SD	07-09	26.8	28.2			07-09	29.9	31.0			07-09	30.9	31.0		
Not ELLs	MSS	07-09	273.9	275.5	0.8		07-09	272.9	277.1	2.1		07-09	271.7	273.4	0.9	
	SD	07-09	24.0	24.8			07-09	28.1	27.6			07-09	28.8	29.7		
English language learners ³	MSS	07-09	244.6	242.1	-1.3 ²	S	07-09	232.3	235.0	1.4 ²	S	07-09	233.2	226.7	-3.2 ²	S
	SD	07-09	23.2	28.0			07-09	27.8	32.9			07-09	26.7	26.1		
Female	MSS	04-09	260.5	276.6	3.2		04-09	258.5	279.9	4.3		04-09	266.3	277.3	2.2	
	SD	04-09	28.7	24.8			04-09	32.9	26.5			04-09	33.4	27.6		
Male	MSS	04-09	256.6	272.8	3.2	E	04-09	248.9	272.2	4.7	L	04-09	251.2	267.6	3.3	L
	SD	04-09	30.0	26.4			04-09	34.8	30.1			04-09	36.0	32.1		

Table reads: In 2004, the mean scale score on the state 4th grade reading test was 261.4 for white students and 249.7 for African American students. In 2009, the mean scale score in 4th grade reading was 277.3 for white students and 268.3 for African American students. Between 2004 and 2009, the mean scale score improved at an average yearly rate of 3.2 points for white students and 3.7 points for African American students, indicating a narrowing of the achievement gap for African Americans.

Note: The MontCAS-Phase 2 is scored on a scale of 200-300.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2009 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table MT-14. Achievement gap trends in mathematics by mean scale scores

NOTE: L = larger gain than comparison group. S = smaller gain than comparison group. E = equal gain to comparison group. MSS = mean scale score. SD = standard deviation. If the average gain for the subgroup of interest, such as African American students, is larger than the average gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

Subgroup	Statistic	Grade 4					Grade 8					Grade 10				
		Year span	Start year	End year	Avg. gain MSS ¹	Gain larger or smaller than comp. group	Year span	Start year	End year	Avg. gain MSS ¹	Gain larger or smaller than comp. group	Year span	Start year	End year	Avg. gain MSS ¹	Gain larger or smaller than comp. group
All tested students	MSS	04-09	243.1	262.9	4.0		04-09	260.9	258.6	-0.5		04-09	258.1	254.5	-0.7	
	SD	04-09	32.8	32.0			04-09	27.6	29.5			04-09	25.8	25.4		
White	MSS	04-09	245.9	266.3	4.1		04-09	263.9	261.6	-0.5		04-09	260.5	256.7	-0.8	
	SD	04-09	32.5	30.6			04-09	26.7	28.8			04-09	25.2	25.2		
African American	MSS	04-09	232.6	256.9	4.9 ²	L	04-09	247.5	250.6	0.6 ²	L	04-09	245.2	248.4	0.6 ²	L
	SD	04-09	31.3	34.2			04-09	23.2	26.5			04-09	21.9	22.1		
Latino	MSS	04-09	234.4	256.3	4.4 ²	L	04-09	253.6	250.7	-0.6 ²	S	04-09	249.3	245.8	-0.7 ²	L
	SD	04-09	29.8	32.1			04-09	26.2	28.8			04-09	24.2	23.6		
Asian	MSS	04-09	250.1	271.2	4.2 ²	L	04-09	274.0	267.6	-1.3 ²	S	04-09	262.7	264.4	0.3 ²	L
	SD	04-09	34.3	32.1			04-09	24.5	30.3			04-09	25.0	24.6		
Native American	MSS	04-09	224.3	242.6	3.7	S	04-09	238.8	238.0	-0.2	L	04-09	237.1	238.2	0.2	L
	SD	04-09	28.6	32.7			04-09	24.6	27.1			04-09	21.5	21.6		
Not low-income	MSS	04-09	249.2	270.1	4.2		04-09	266.5	265.2	-0.3		04-09	261.5	258.4	-0.6	
	SD	04-09	32.3	29.6			04-09	26.1	28.0			04-09	25.2	24.3		
Low-income	MSS	04-09	232.7	253.0	4.1	S	04-09	249.2	247.0	-0.4	S	04-09	246.7	245.1	-0.3	L
	SD	04-09	31.1	32.4			04-09	27.0	28.8			04-09	24.6	23.2		
Not disabled	MSS	07-09	266.5	266.4	0.0		07-09	262.5	262.5	0.0		07-09	257.8	257.1	-0.3	
	SD	07-09	39.0	30.1			07-09	28.4	27.8			07-09	25.7	24.9		
Students with disabilities ³	MSS	07-09	237.6	237.4	-0.1	S	07-09	226.7	228.3	0.8	L	07-09	229.2	233.0	1.9	L
	SD	07-09	33.1	33.2			07-09	23.4	24.9			07-09	19.6	18.8		
Not ELLs	MSS	07-09	264.2	264.2	0.0		07-09	259.6	259.5	-0.1		07-09	255.7	255.1	-0.3	
	SD	07-09	31.2	31.3			07-09	29.6	29.2			07-09	26.4	25.3		
English language learners ³	MSS	07-09	233.8	228.5	-2.7 ²	S	07-09	223.8	226.0	1.1 ²	L	07-09	227.2	227.8	0.3 ²	L
	SD	07-09	30.0	28.7			07-09	20.5	23.5			07-09	17.3	14.6		
Female	MSS	04-09	242.3	262.4	4.0		04-09	260.9	258.3	-0.5		04-09	258.4	254.3	-0.8	
	SD	04-09	32.5	31.5			04-09	27.0	29.1			04-09	24.7	24.4		
Male	MSS	04-09	243.8	263.4	3.9	S	04-09	260.9	258.8	-0.4	L	04-09	257.8	254.7	-0.6	L
	SD	04-09	33.1	32.4			04-09	28.2	30.1			04-09	26.8	26.4		

Table reads: In 2004, the mean scale score on the state 4th grade math test was 245.9 for white students and 232.6 for African American students. In 2009, the mean scale score in 4th grade math was 266.3 for white students and 256.9 for African American students. Between 2004 and 2009, the mean scale score

improved at an average yearly rate of 4.1 points for white students and 4.9 points for African American students, indicating a narrowing of the achievement gap for African Americans.

Note: The MontCAS-Phase 2 is scored on a scale of 200-300.

¹Numbers in these columns are subject to rounding error.

²The number of students tested in this subgroup at this grade level was fewer than 500 in 2009 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

³Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table MT-15. Numbers of test-takers

Subgroup	Subject	Grade 4					Grade 8					Grade 10				
		Year span	# of test-takers start year	# of test-takers end year	Change in # of test-takers over time	% of test-takers in subgroup in end year	Year span	# of test-takers start year	# of test-takers end year	Change in # of test-takers over time	% of test-takers in subgroup in end year	Year span	# of test-takers start year	# of test-takers end year	Change in # of test-takers over time	% of test-takers in subgroup in end year
All tested students	Reading	04-09	10,614	10,859	2.3%	100.0%	04-09	12,077	11,159	-7.6%	100.0%	04-09	11,425	11,386	-0.3%	100.0%
	Math	04-09	10,614	10,859	2.3%	100.0%	04-09	12,077	11,159	-7.6%	100.0%	04-09	11,425	11,386	-0.3%	100.0%
White	Reading	04-09	8,914	8,803	-1.2%	81.1%	04-09	10,301	9,262	-10.1%	83.0%	04-09	10,013	9,710	-3.0%	85.3%
	Math	04-09	8,914	8,803	-1.2%	81.1%	04-09	10,301	9,262	-10.1%	83.0%	04-09	10,013	9,710	-3.0%	85.3%
African American	Reading	04-09	103	135	31.1%	1.2%	04-09	76	102	34.2%	0.9%	04-09	53	83	56.6%	0.7%
	Math	04-09	103	135	31.1%	1.2%	04-09	76	102	34.2%	0.9%	04-09	53	83	56.6%	0.7%
Latino	Reading	04-09	240	317	32.1%	2.9%	04-09	240	280	16.7%	2.5%	04-09	191	267	39.8%	2.3%
	Math	04-09	240	317	32.1%	2.9%	04-09	240	280	16.7%	2.5%	04-09	191	267	39.8%	2.3%
Asian	Reading	04-09	105	87	-17.1%	0.8%	04-09	100	114	14.0%	1.0%	04-09	105	105	0.0%	0.9%
	Math	04-09	105	87	-17.1%	0.8%	04-09	100	114	14.0%	1.0%	04-09	105	105	0.0%	0.9%
Native American	Reading	04-09	1,228	1,399	13.9%	12.9%	04-09	1,349	1,278	-5.3%	11.5%	04-09	1,046	1,194	14.1%	10.5%
	Math	04-09	1,228	1,399	13.9%	12.9%	04-09	1,349	1,278	-5.3%	11.5%	04-09	1,046	1,194	14.1%	10.5%
Low-income	Reading	04-09	3,945	4,571	15.9%	42.1%	04-09	3,911	4,053	3.6%	36.3%	04-09	2,656	3,383	27.4%	29.7%
	Math	04-09	3,945	4,571	15.9%	42.1%	04-09	3,911	4,053	3.6%	36.3%	04-09	2,656	3,383	27.4%	29.7%
Students w/ disabilities	Reading	07-09	1,300	1,316	1.2%	12.1%	07-09	1,446	1,296	-10.4%	11.6%	07-09	1,237	1,229	-0.6%	10.8%
	Math	07-09	1,300	1,316	1.2%	12.1%	07-09	1,446	1,296	-10.4%	11.6%	07-09	1,237	1,229	-0.6%	10.8%
English language learners	Reading	07-09	443	403	-9.0%	3.7%	07-09	515	300	-41.7%	2.7%	07-09	412	267	-35.2%	2.3%
	Math	07-09	443	403	-9.0%	3.7%	07-09	515	300	-41.7%	2.7%	07-09	412	267	-35.2%	2.3%
Female	Reading	04-09	5,160	5,171	0.2%	47.6%	04-09	5,924	5,374	-9.3%	48.2%	04-09	5,468	5,529	1.1%	48.6%
	Math	04-09	5,160	5,171	0.2%	47.6%	04-09	5,924	5,374	-9.3%	48.2%	04-09	5,468	5,529	1.1%	48.6%
Male	Reading	04-09	5,454	5,601	2.7%	51.6%	04-09	6,153	5,689	-7.5%	51.0%	04-09	5,957	5,852	-1.8%	51.4%
	Math	04-09	5,454	5,601	2.7%	51.6%	04-09	6,153	5,689	-7.5%	51.0%	04-09	5,957	5,852	-1.8%	51.4%

Table reads: In 2004, 8,914 students in the white subgroup took the state 4th grade reading test. By 2009, the number of white test-takers had fallen to 8,803 students, a decrease of 1.2%. In 2009, the white subgroup made up 81.1% of the 10,859 4th graders taking the reading test that year.

Note: **Bold** type indicates that the number of students tested in this subgroup at this grade level was fewer than 500 in 2009 or the most recent year with available data.

Key Terms

Percentage proficient (and above) — The percentage of students in a group who score at or above the cut score for “proficient” performance on the state test used to determine progress under NCLB. The Act requires states to report student test performance in terms of at least three achievement levels: basic, proficient, and advanced. Adequate yearly progress determinations are based on the percentage of students scoring at the proficient level and above.

Percentage basic (and above) — The percentage of students in a group who score at or above the cut score for “basic” performance on the state test used to determine progress under NCLB.

Percentage advanced — The percentage of students in a group who reach or exceed the cut score for “advanced” performance on the state test used to determine progress under NCLB.

Moderate-to-large gain — For the percentage basic, proficient, or advanced, an average gain of 1 or more percentage points per year. For effect size, an average gain of 0.02 or greater per year.

Slight gain — For the percentage basic, proficient, or advanced, an average gain of less than 1 percentage point per year. For effect size, an average gain of less than 0.02 per year.

Moderate-to-large decline — For the percentage basic, proficient, or advanced, an average decline of 1 or more percentage points per year. For effect size, an average decline of 0.02 or greater per year.

Slight decline — For the percentage basic, proficient, or advanced, an average decline of less than 1 percentage point per year. For effect size, an average decline of less than 0.02 per year.

Effect size — A statistical tool that conveys the amount of difference between test results using a common unit of measurement which does not depend on the scoring scale for a particular test.

Accumulated annual effect size — The cumulative gain in effect size over a range of years.

Mean scale score — The arithmetical average of a group of test scores, expressed on a common scale for a particular state's test. The mean is calculated by adding the scores and dividing the sum by the number of scores.

Standard deviation — A measure of how much test scores tend to deviate from the mean—in other words, how spread out or bunched together test scores are. If students' scores are bunched together, with many scores close to the mean, then the standard deviation will be small. If scores are spread out, with many students scoring at the high or low end of the scale, then the standard deviation will be large.

Cautions and Explanations

Different labels for achievement levels — For consistency, all of the state profiles developed for this report use a common set of labels (basic, proficient, and advanced) for the main achievement levels required by NCLB. In practice, however, some states may use different labels, such as “meets standard” instead of proficient, and some states have established additional achievement levels beyond those required by NCLB.

Different names for subgroups — For the sake of consistency and ease of data tabulation, all of the state profiles developed for this report use a common set of names for the major student subgroups. In practice, however, states use various names for subgroups that may differ from those used here (such as using “Hispanic” instead of “Latino,” or “special education students” instead of “students with disabilities”). Moreover, a few states separately track the performance of subgroups not included in the analyses for this report.

Special caution for students with disabilities and English language learners — Trends for students with disabilities and English language learners should be interpreted with caution because changes in federal guidance and state accountability plans may have altered which students in these subgroups are tested for accountability purposes, how they are tested, and when their test scores are counted as proficient under NCLB. These factors could affect the year-to-year comparability of test results.

Inclusion of former English language learners — In many states, the subgroup of English language learners (also known as limited English proficient students) includes students who were formerly English language learners but who have achieved English language proficiency or fluency in the last two years. Federal NCLB regulations permit states to include these formerly ELL students (sometimes referred to as “redesignated fluent English proficient” students) in the ELL subgroup for up to two years for purposes of NCLB accountability.

Limitations of percentage proficient measure — The percentage proficient, the main gauge of student performance under NCLB, can be easily understood and gives a snapshot of how many students have met their state’s performance expectations. But it also has several limitations as a measure of student achievement. Users of percentage proficient data should keep in mind these limitations, particularly the following:

- * “Proficient” means different things across different states. States vary widely in curriculum, learning expectations, and tests, and state tests differ considerably in their difficulty and cut scores for proficient performance.
- * Although this study has taken steps to avoid comparing test data where there have been “breaks” in comparability resulting from new tests, changes in content standards, revised cut scores, or other major changes in testing programs, the year-to-year comparability of test results in the same state may still be affected by less obvious policy and demographic changes.
- * Changes in student performance may occur that are not reflected in percentage proficient data, such as an increase in the number of students reaching performance levels below and above proficient (such as the basic or advanced levels).
- * The size of the achievement gaps between various subgroups depends in part on where a state sets its cut score for proficiency. For example, if a proficiency cut score is set so high that almost nobody reaches it or so low that almost everyone reaches it, there will be little apparent achievement gap. By contrast, if the cut score is closer to the mean test score, the gaps between subgroups will be more apparent.

Difficulty of attributing causes — Although the tables in this profile show trends in test scores since the enactment of NCLB, one cannot assume that these trends have occurred *because* of NCLB. It is always difficult to determine a cause-and-effect relationship between test score trends and any specific education policy or program due to the many federal, state, and local reforms undertaken in recent years and due to the lack of an appropriate “control” group of students not affected by NCLB.